

What is claimed is:

1. A method for reverberation processing, comprising:
  - providing a high quality filter module and a low quality filter module;
  - inputting an audio signal into the high quality filter module for generating a high quality reverberation in a limited period;
  - inputting the audio signal to the low quality filter module for generating a low quality reverberation with unlimited length;
  - delaying the reverberation generated by the low quality filter module;
  - and
- 10 combining the high and low quality reverberations generated by the high quality filter module and the low quality filter module.
2. The method of claim 1, wherein the step of providing the high quality filter module is providing a finite impulse response filter (FIR filter).
3. The method as claimed in claim 1, wherein the step of providing the low quality filter module is providing an infinite impulse response filter (IIR filter).
- 15 4. The method as claimed in claim 1, wherein the step of delaying the reverberation generated by the low quality filter module is achieved by using a delay unit.
- 20 5. The method as claimed in claim 1, wherein in the step of combining the high and low quality reverberations generated by the high quality filter module and the low quality filter module, the high and low quality reverberations can be generated in an overlapped way.
6. The method as claimed in claim 1, wherein the step of combining the high and low quality reverberations generated by the high quality filter module and the low quality filter module is achieved by using an adder.

7. The method as claimed in claim 1, wherein in the step of inputting an audio signal to the high quality filter module, the limited period is the beginning 50 ms.
8. A reverberation processing apparatus provided with a common input terminal for receiving an audio signal, comprising:
- 5        a high quality filter module connected to the common input terminal and receive the audio signals for generating high quality reverberation effects lasting for a finite period of time;
  - 10      a low quality filter module connected to the common input terminal and receiving the audio signals for generating low quality reverberation effects lasting for a infinite period of time; and
  - 15      a delay unit connected to the low quality filter module to delay a time of the audio signals with low quality reverberation effects.
9. The reverberation processing apparatus as claimed in claim 8, wherein the finite period of time is about 50ms.
10. The reverberation processing apparatus as claimed in claim 8, wherein the high quality filter module is a FIR filter.
11. The reverberation processing apparatus as claimed in claim 8, wherein the low quality filter module is an IIR filter.
- 15      12. The reverberation processing apparatus as claimed in claim 8, wherein the delay time lasts for about 25ms to 45ms.
13. The reverberation processing apparatus as claimed in claim 8, wherein the two audio signals with low quality reverberation effects and high quality reverberation effects overlap after the delay time.
- 20      14. The reverberation processing apparatus as claimed in claim 8, wherein the two audio signals with low quality reverberation effects and high quality

reverberation effects are combined by an adder.